Applicant: Tom Cheng et al. Attorney's Docket No.: 13914-033001 / 2003P00877 US

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## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

## Listing of Claims:

(Currently Amended) A computer-readable medium having embodied thereon a
computer program configured to determine whether a user is permitted to access a business
object when executing a software application of an enterprise information technology system, the
medium comprising one or more code segments configured to:

use a permission object to determine whether a user associated with an entry in user information is permitted to access at least part of a data object associated with a data object type, wherein:

the entry in the user information associates the user with a user affiliation, the permission object identifies:

a user affiliation to which the permission object applies,

a data object type to which the permission object applies such that the data object type is associated with multiple attributes and each data object having the data object type is associated with the multiple attributes,

a permission attribute identifying one of the multiple attributes, and

a permission value for the permission attribute, and

an attribute access group having one or more attributes of the multiple attributes associated with the data object type, and

an attribute value group having one or more values associated with the one or more attributes in the attribute access group, and

the user is permitted to access the data object when wherein upon determination that (1) the user affiliation that is associated with the user is the same user affiliation as the user affiliation to which the permission object applies, (2) the data object type of the data object is the same data object type as the data object type to which the permission object applies, and (3) a value of an attribute of the multiple attributes associated with the data object is consistent with

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the permission value of the permission attribute and the attribute corresponds to the permission attribute, (4) at least one attribute of the data object that the user seeks to access corresponds to an attribute of the attribute access group of the permission object, and (5) a value of an attribute of one of the multiple attributes associated with the data object is consistent with the value of the attribute of the attribute value group, the user is permitted to access the attribute sought to be accessed and not permitted to access any other of the multiple attributes not corresponding to the attribute of the attribute access group.

- 2. (Currently amended) The medium of claim 1 wherein the one or more code segments are further configured to permit the user to access at least part of the data object when the value of the attribute of one of the multiple attributes associated with the data object is the same as the permission value of the permission attribute.
- 3. (Currently amended) The medium of claim 1 wherein the one or more code segments are further configured to permit the user to access at least part of the data object when the value of the attribute of one of the multiple attributes associated with the data object is the within a range specified by the permission value of the permission attribute.
- 4. (Currently amended) The medium of claim 1 wherein the one or more code segments are further configured to permit the user to access at least part of the data object when the value of the attribute of one of the multiple attributes associated with the data object is one of enumerated values specified by the permission value of the permission attribute.

## 5-6. (Canceled)

7. (Currently amended) The medium of claim 1 wherein:

the permission object identifies a permitted action, and

the one or more code segments are further configured to permit the user to access at least part of the data object and perform an action on the data object when the action is consistent with the permitted action identified in the permission object.

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8. (Currently Amended) A method for determining whether a user is permitted to access a business object when executing a software application of an enterprise information technology system, the method comprising:

using a permission object to determine whether a user associated with an entry in user information is permitted to access at least part of a data object associated with a data object type, wherein:

the entry in the user information associates the user with a user affiliation, the permission object identifies:

- a user affiliation to which the permission object applies,
- a data object type to which the permission object applies such that the data object type is associated with multiple attributes and each data object having the data object type is associated with the multiple attributes,
  - a permission attribute identifying one of the multiple attributes, and
  - a permission value for the permission attribute, and
- an attribute access group having one or more attributes of the multiple attributes associated with the data object type, and

an attribute value group having one or more values associated with the one or more attributes in the attribute access group, and

the user is permitted to access the data object when wherein upon determination that (1) the user affiliation that is associated with the user is the same user affiliation as the user affiliation to which the permission object applies, (2) the data object type of the data object is the same data object type as the data object type to which the permission object applies, and (3) a value of an attribute of the multiple attributes associated with the data object is consistent with the permission value of the permission attribute and the attribute corresponds to the permission attribute, (4) at least one attribute of the data object that the user seeks to access corresponds to an attribute of the attribute access group of the permission object, and (5) a value of an attribute of one of the multiple attributes associated with the data object is consistent with the value of the attribute of the attribute value group, the user is permitted to access the attribute sought to be

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accessed and not permitted to access any other of the multiple attributes not corresponding to the attribute of the attribute access group.

- 9. (Currently amended) The method of claim 8 further comprising permitting the user to access at least part of the data object when the value of the attribute of one of the multiple attributes associated with the data object is the same as the permission value of the permission attribute.
- 10. (Currently amended) The method of claim 8 further comprising permitting the user to access at least part of the data object when the value of the attribute of one of the multiple attributes associated with the data object is the within a range specified by the permission value of the permission attribute.
- 11. (Currently amended) The method of claim 8 further comprising permitting the user to access at least part of the data object when the value of the attribute of one of the multiple attributes associated with the data object is one of enumerated values specified by the permission value of the permission attribute.

## 12. (Canceled)

- 13. (Currently Amended) A computer system for determining whether a user is permitted to access at least part of a data object when executing a software application of an enterprise information technology system, the system comprising:
- a data repository for access control information for software having data objects, each data object (1) being associated with a data object type having multiple attributes, (2) having multiple attributes that are the same as the multiple attributes of the data object type to which the data object is associated, and (3) having a value associated with each attribute of the multiple attributes, the data repository including:
  - user information that associates a user affiliation with a user of the software application, and

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permission information having multiple permission objects, each permission object identifying a user affiliation to which the permission object applies, a data object type to which the permission object applies, a permission attribute identifying one of the multiple attributes, and a permission value for the permission attribute, an attribute access group having one or more attributes of the multiple attributes associated with the data object type, and an attribute value group having one or more values associated with the one or more attributes in the attribute access group; and

an executable software module that causes:

a comparison of a value of an attribute of the multiple attributes associated with a data object to which a user seeks to access such that the attribute corresponds to the permission attribute of a permission object with the permission value of the permission object, and

a comparison of at least one attribute of the data object that the user seeks to access such that the attribute corresponds to an attribute of the attribute access group of the permission object,

a comparison of a value of an attribute of one of the multiple attributes associated with the data object such that the value is consistent with the value of the attribute of the attribute value group, and

an indication that a user is permitted to access a data object the attribute sought to be accessed and not permitted to access any other of the multiple attributes not corresponding to the attribute of the attribute access group when (1) the value of the attribute associated with the data object is consistent with the permission value of the permission object, (2) at least one attribute of the data object that the user seeks to access corresponds to an attribute of the attribute access group of the permission object, and (3) a value of an attribute of one of the multiple attributes associated with the data object is consistent with the value of the attribute of the attribute value group.

14. (Currently amended) The system of claim 13 wherein the executable software module causes an indication that a user is permitted to access at least part of the data object when

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the value of the attribute of one of the multiple attributes associated with the data object is the same as the permission value of the permission attribute.

15. (Currently amended) The system of claim 13 wherein the executable software module causes an indication that a user is permitted to access at least part of the data object when the value of the attribute of one of the multiple attributes associated with the data object is the within a range specified by the permission value of the permission attribute.

16. (Currently amended) The system of claim 13 wherein the executable software module causes an indication that a user is permitted to access at least part of the data object when the value of the attribute of one of the multiple attributes associated with the data object is one of enumerated values specified by the permission value of the permission attribute.

17-18. (Canceled)

19. (Currently amended) The system of claim 13 wherein:

the permission object identifies a permitted action, and

the executable software module causes an indication that a user is permitted to access <u>at</u> <u>least part of</u> the data object and perform an action on the data object when the action is consistent with the permitted action identified in the permission object.

20. (Currently amended) The medium of claim 1 wherein:

the permission object identifies a permitted action, and

the one or more code segments are further configured to permit the user to access the <u>at</u>
<u>least part of</u> data object and perform one or more database operations on the data object when the
action is consistent with the permitted action identified in the permission object, where the
database operations comprise create, read, update and delete.